

Notice of Allowability

Application No.

10/611,552

Examiner

Monica M. Pyo

Applicant(s)

BROWN ET AL.

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2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 21 March 2006.
2. ☒ The allowed claim(s) is/are 1-10 and 12-30.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

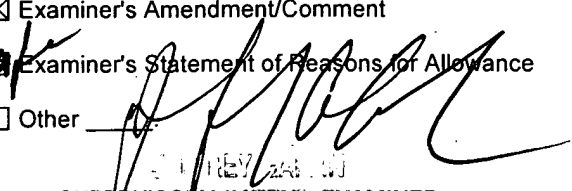
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

DETAILED ACTION

1. Claims 1-10 and 12-30 are pending in this Office Action.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
3. Authorization for this examiner's amendment was given in a telephone interview with Mr. Samuel Kassatly on 4/28/2006.
4. Please replace claims 1, 3, 16, 17, 19, 21, 26 and 28 with amended claims 1, 3, 16, 17, 19, 21, 26 and 28:

1..(Currently Amended) A processor-implemented method of efficiently writing records from an in-memory database to a disk database, comprising:

linking the records by a linked list;

creating a header data structure of the linked records;

linking a new record in the in-memory database to the header data structure;

transferring the records in the linked list and the new records from the in-memory database to the disk database using the header data structure;

wherein transferring the records includes transferring blocks of the records as a single transaction to the disk database, in order to minimize the a number of transfers from the in-memory database to the disk database;

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dynamically setting a last commit pointer and a last flush pointer to keep track of: (i) a block the records that have been transferred to the disk database but not yet committed; (ii) a block the records that have not been transferred to the disk database; and (iii) a block of the records that have been transferred and committed to the disk database, in order to maintain synchronization between the in-memory database and the disk database; and

determining whether a committing operation of the block of the records that have been transferred to the disk database but not yet committed is successful, and if the committing operation is determined to be unsuccessful, deeming the committing operation of all the records in the block of the records that have been transferred to the disk database but not yet committed is successful, to have failed.

3. (Currently Amended) The method of claim 1, wherein the header data structure comprises an entity name that identifies the new record.

16. (Currently Amended) The method of claim 15, further comprising writing to the disk ~~memory~~ database all records in the link list that occur after the record to which the last commit pointer points.

17. (Currently Amended) The method of claim 16, further comprising setting a last flush pointer of the header of the header data structure equal to ~~the~~ a last count if the writing of the records to the disk memory ended successfully.

19. (Currently Amended) A computer program product having instruction codes stored on a computer-usable readable medium for efficiently writing records from an in-memory database to a disk database, comprising:

a set of instruction codes for linking the records by a linked list;

a set of instruction codes for creating a header data structure of the linked records;

a set of instruction codes for linking a new records in the in-memory database to the header data structure; and

a set of instruction codes for transferring the records in the linked list and the new record from the in-memory database to the disk database using the header data structure;

wherein the set of instruction codes for transferring the records includes a set of instruction codes for transferring blocks of the records as a single transaction to the disk database, in order to minimize a number of transfers from the in-memory database to the disk database;

a set of instruction codes for dynamically setting a last commit pointer and a last flush pointer to keep track of: (i) a block the records that have been transferred to the disk database but not yet committed; (ii) a block the records that have not been transferred to the disk database; and (iii) a block of the records that have been transferred and committed to the disk database, in order to maintain synchronization between the in-memory database and the disk database; and

a set of instruction codes for determining whether a committing operation of the block of the records that have been transferred to the disk database but not yet committed is successful, and if the committing operation is determined to be unsuccessful, deeming the committing

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operation of all the records in the block of the records that have been transferred to the disk database but not yet committed is successful, to have failed.

21. (Currently Amended) The computer program product of claim 18, wherein the header data structure comprises an entity name that identifies the new record.

26. (Currently Amended) A processor-implemented system for efficiently writing records from an in-memory database to a disk database, comprising;

- means for linking the records by a linked list;
- means for creating a header data structure of the linked records;
- means for linking a new records in the in-memory database to the header data structure;
- means for transferring the records in the linked list and the new record from the in-memory database to the disk database using the header data structure;

wherein the means for transferring the records includes a means for transferring blocks of records as a single transaction to the disk database, in order to minimize a number of transfers from the in-memory database to the disk database;

means for dynamically setting a last commit pointer and a last flush pointer to keep track of: (i) a block the records that have been transferred to the disk database but not yet committed; (ii) a block the records that have not been transferred to the disk database; and (iii) a block of the records that have been transferred and committed to the disk database, in order to maintain synchronization between the in-memory database and the disk database; and

means for determining whether a committing operation of the block of the records that have been transferred to the disk database but not yet committed is successful, and if the committing operation is determined to be unsuccessful, deeming the committing operation of all the records in the block of the records that have been transferred to the disk database but not yet committed is successful, to have failed.

28. (Currently Amended) The system of claim 26, wherein the header data structure comprises an entity name that identifies the new record.

Allowable Subject Matter

5. Claims 1-10 and 12-30 are allowed.

Conclusion

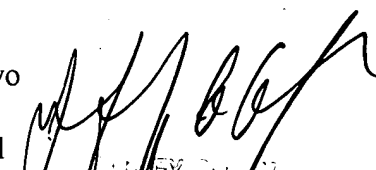
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica M. Pyo whose telephone number is 571-272-8192. The examiner can normally be reached on Mon-Fri 6:30 - 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monica M Pyo
Examiner
Art Unit 2161



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SUPERVISORY PATENT EXAMINER
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4/28/06